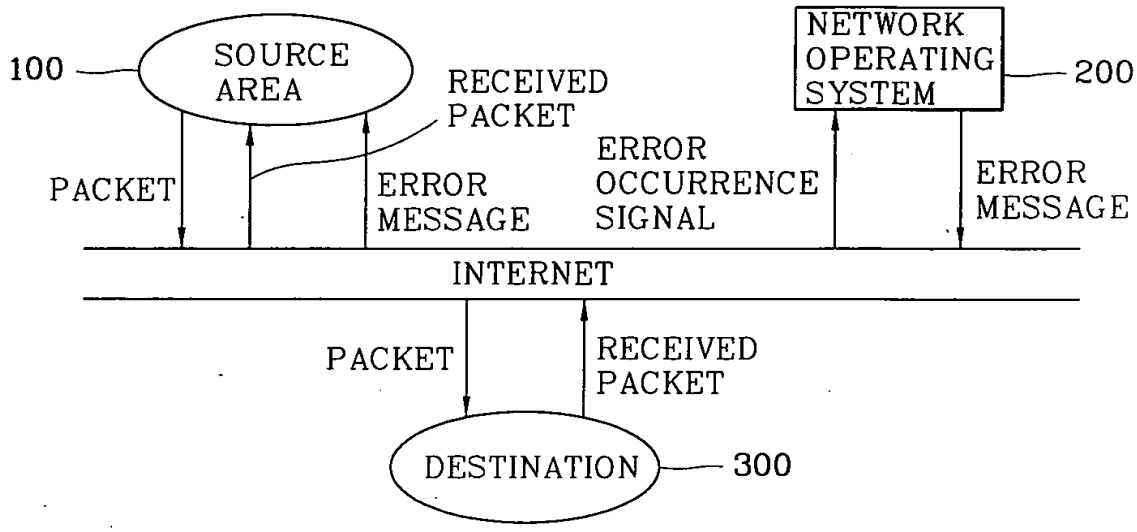
FIG. 1



09/942,380 - 082201

FIG. 2

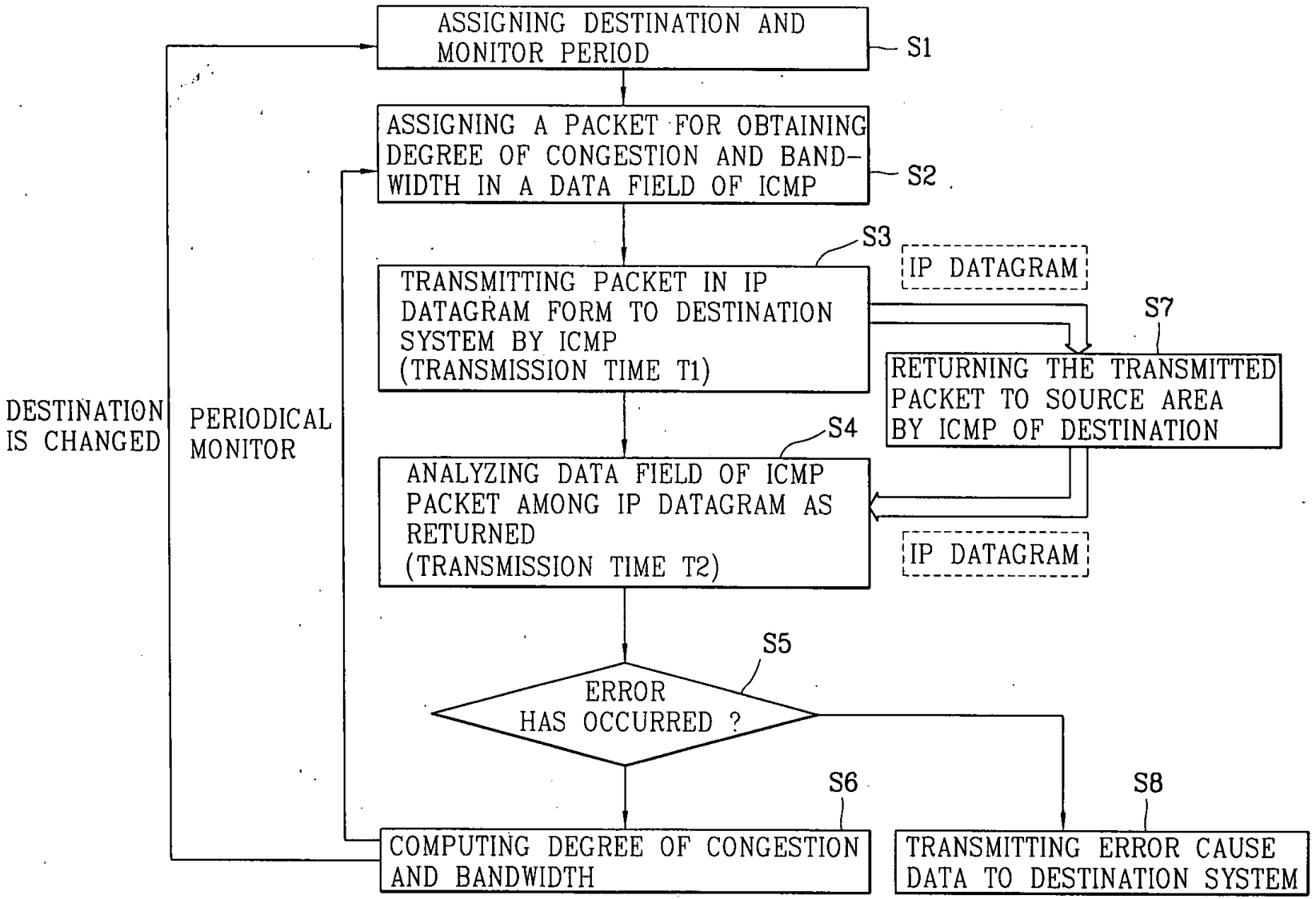

ASSIGNING DESTINATION AND MONITOR PERIOD
S1
ASSIGNING A PACKET FOR OBTAINING DEGREE OF CONGESTION AND BAND-WIDTH IN A DATA FIELD OF ICMP
S2
S3
IP DATAGRAM
TRANSMITTING PACKET IN IP DATAGRAM FORM TO DESTINATION SYSTEM BY ICMP (TRANSMISSION TIME T1)
S7
RETURNING THE TRANSMITTED PACKET TO SOURCE AREA BY ICMP OF DESTINATION
DESTINATION IS CHANGED
PERIODICAL MONITOR
S4
ANALYZING DATA FIELD OF ICMP PACKET AMONG IP DATAGRAM AS RETURNED (TRANSMISSION TIME T2)
IP DATAGRAM
S5
ERROR HAS OCCURRED ?
S6
S8
COMPUTING DEGREE OF CONGESTION AND BANDWIDTH
TRANSMITTING ERROR CAUSE DATA TO DESTINATION SYSTEM

FIG. 3

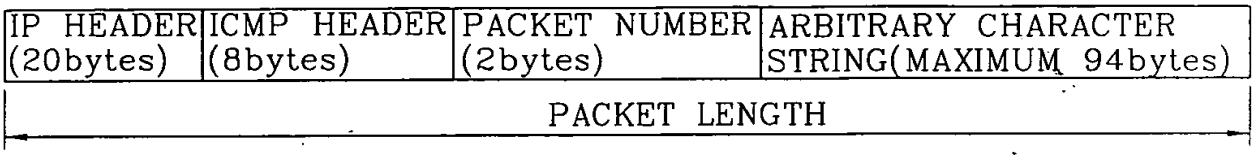

IP HEADER (20bytes)
ICMP HEADER (8bytes)
PACKET NUMBER (2bytes)
ARBITRARY CHARACTER STRING(MAXIMUM 94bytes)
PACKET LENGTH

FIG. 4

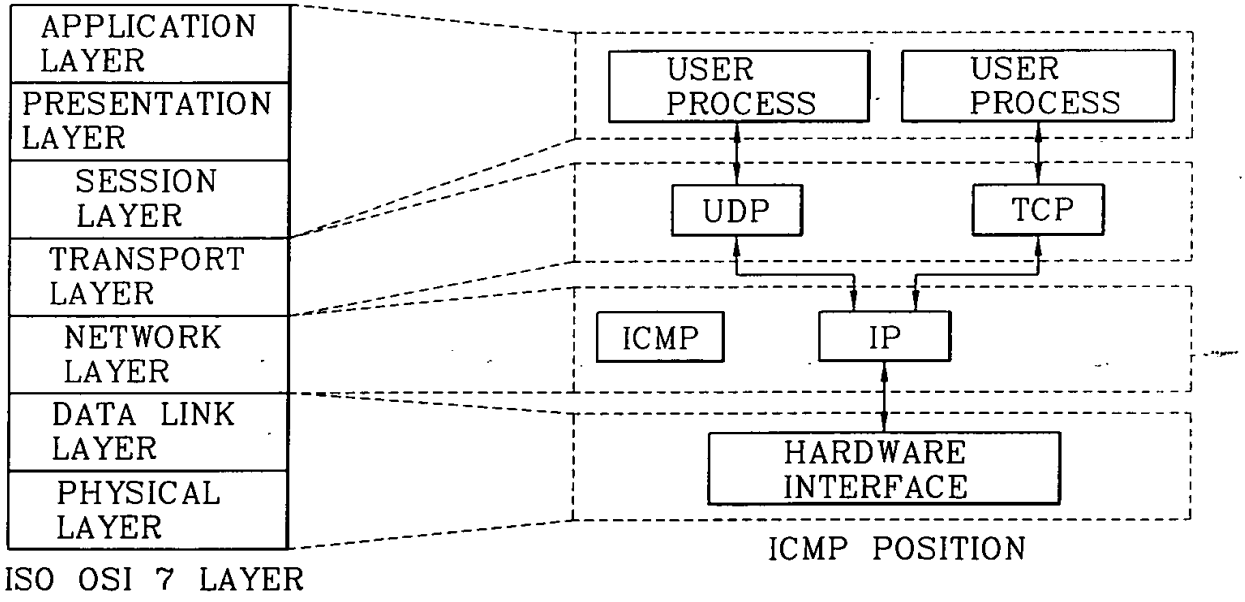
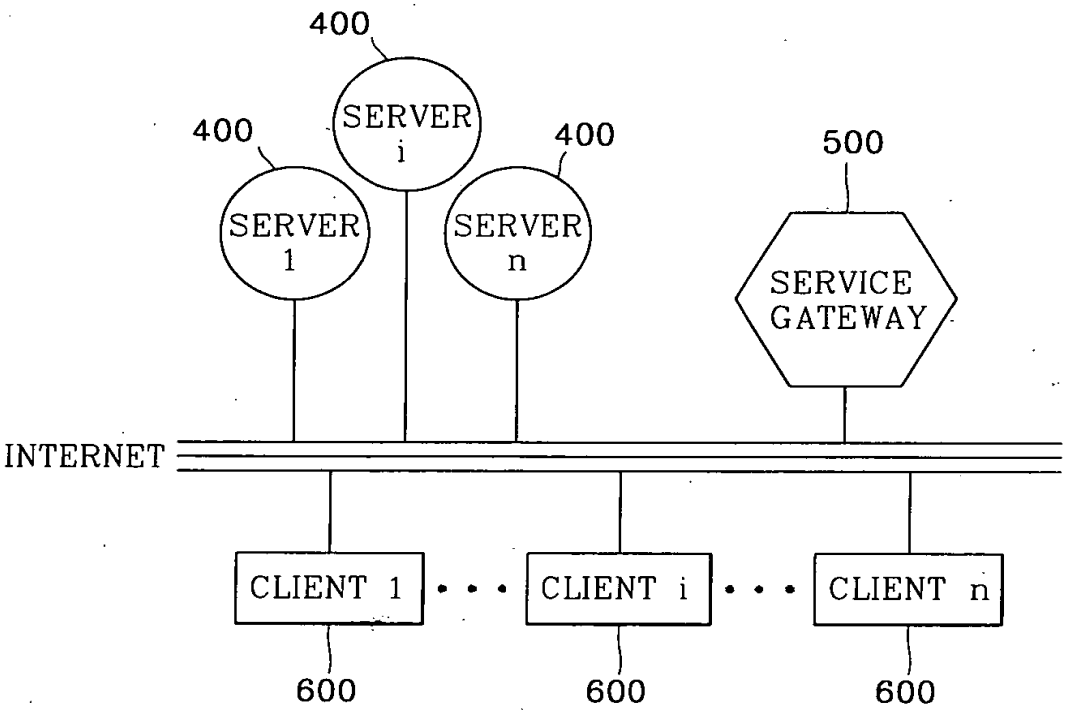

APPLICATION LAYER
PRESENTATION LAYER
SESSION LAYER
TRANSPORT LAYER
NETWORK LAYER
DATA LINK LAYER
PHYSICAL LAYER
USER PROCESS
USER PROCESS
UDP
TCP
ICMP
IP
HARDWARE INTERFACE
ISO OSI 7 LAYER
ICMP POSITION

FIG. 5


400
SERVER i
400
SERVER 1
400
SERVER n
500
SERVICE GATEWAY
INTERNET
CLIENT 1
CLIENT i
CLIENT n
600
600
600